New York State Testing Program
Next Generation Learning Standards
Mathematics Test

Performance Level Descriptions

Grade

October 2020

THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK /
ALBANY, NY 12234

Cluster	Performance Level 4	Performance Level 3	Performance Level 2	Performance Level 1
Students analyze proportional relationships and use them to solve real-world and mathematical problems. (NY-7.RP.1-3)		Represent a proportional relationship using an equation. (7.RP.2c)	Represent a verbal description of a proportional relationship using an equation.	
	Interpret the points (0, 0) and (1, r), where r is the unit rate, on the graph of a proportional relationship, and explain what any point (x, y) on the graph of a proportional relationship means in terms of the situation.	Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate. (7.RP.2d)	Identify the points representing the initial value (0, 0) and the unit rate on the graph of a proportional relationship in terms of the situation.	Identify points on the graphs of proportional relationships.
	Analyze and use proportional relationships to solve multi-step real-world and mathematical problems requiring application of knowledge and skills involving ratio and/or percentages.	Use proportional relationships to solve multi-step ratio and percent problems.[‡] (7.RP.3)	Use proportional relationships to solve unit rate problems in a real-world context. Solve mathematical or real-world problems involving finding the whole, given a part and the percent.	Use multiplication or addition to find missing ratio values in simple mathematical problems involving ratio or percent.

[‡] Examples of

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Students solve real-life and mathematical problems using numerical and algebraic expressions, equations, and inequalities.[‡] (NY-7.EE.3-4[§])	Explain the relationship between the steps used to solve a given equation in the form px + q = r and p (x + q) = r where p, q and r using an algebraic solution and an arithmetic solution.	Solve word problems leading to equations of the form px + q = r and p (x + q) = r where p, q, and r are rational numbers. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.[**](7.EE.4a)	Use variables to represent quantities in a real-world or mathematical problem and construct simple inequalities to solve problems by reasoning about the quantities. Determine if a given rational number is the solution of an equation.	Solve linear equations of the form px + q = r with integer coefficients.
	Explain the relationship between the steps used to solve a given inequality in the form px + q > r , px + $q \geq r$, px + q < r , or px + q Gr where p, q, and r are values of the real number system using an algebraic solution and an arithmetic solution. Explain whether a solution to a given problem is reasonable.	Solve word problems leading to linear inequalities of the form px + q > r , px + $q \geq r$, px + q < r , or px + q Gr where p, q, and r are rational numbers. (7.EE.4b)		

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Students solve real-life and mathematical problems using numerical and algebraic expressions, equations, and inequalities. (NY-7.EE.3-4)		Graph the solution set of the inequality on the number line and interpret it in the context of the problem. (7.EE.4b)	Graph the solution set in the form px + q (N (x.1 125.04 reW n[illegible] 1 14-0.002 Tfw 24)8 1.382.33.24 9tirobm389nae47	

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Students solve real-life and mathematical problems involving angle measure, area, surface area, and volume. (NY-7.G.4-6)		Solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles and trapezoids. (7.G.6)	Solve real-world and mathematical problems involving the areas	

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Students draw informal comparative				

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Students investigate chance processes and develop, use, and evaluate probability models. (NY-7.SP.8)				